

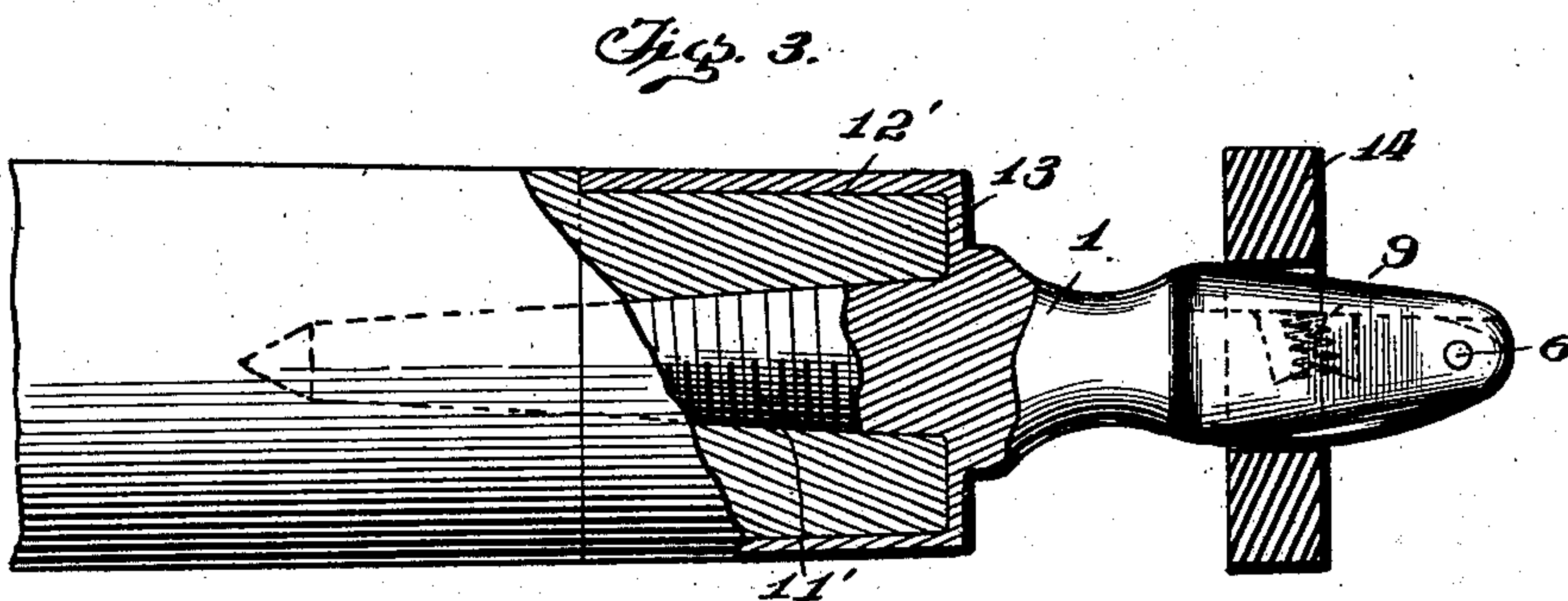
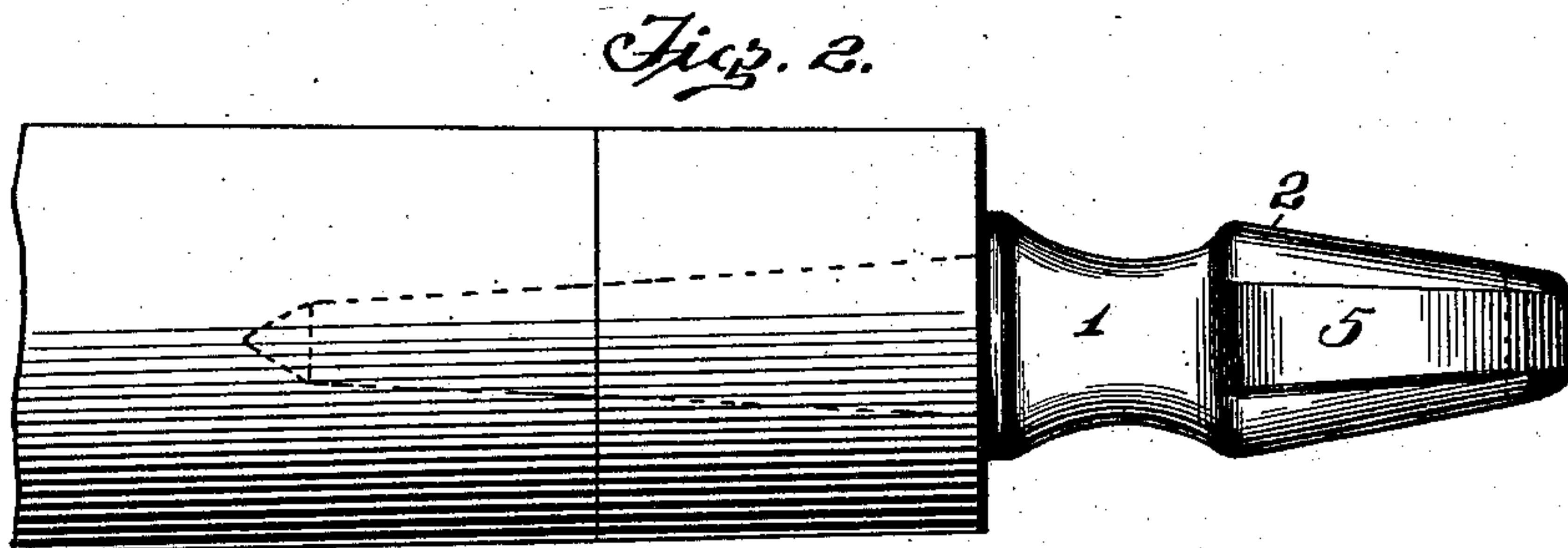
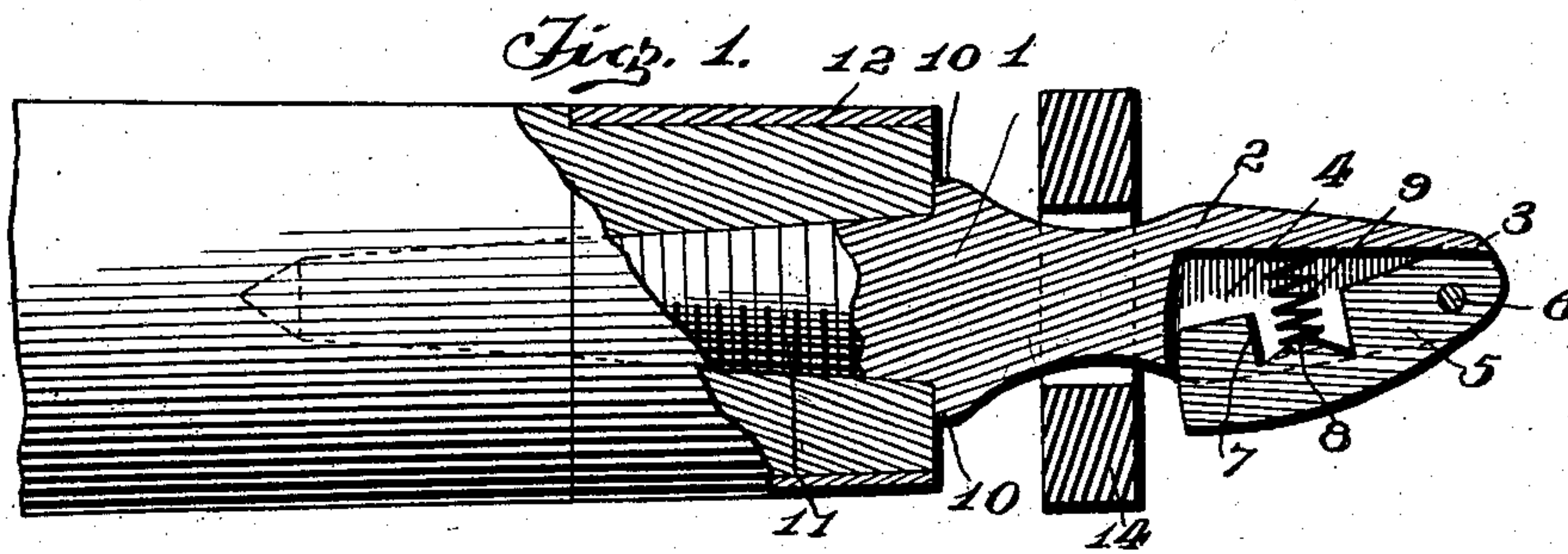
No. 702,527.

Patented June 17, 1902.

T. A. BAKKEN.  
TRACE FASTENER.

(Application filed Aug. 28, 1901.)

(No Model.)



Witnesses

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# UNITED STATES PATENT OFFICE.

THORE A. BAKKEN, OF DE SOTO, WISCONSIN.

## TRACE-FASTENER.

SPECIFICATION forming part of Letters Patent No. 702,527, dated June 17, 1902.

Application filed August 28, 1901. Serial No. 73,605. (No model)

*To all whom it may concern:*

Be it known that I, THORE A. BAKKEN, a citizen of the United States, residing at De Soto, in the county of Vernon and State of Wisconsin, have invented certain new and useful Improvements in Trace-Fasteners; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in trace-fasteners, and more particularly to that class adapted to automatically lock the trace against disengagement with the singletree.

One of the objects of the invention is to provide a trace-fastener which shall be readily applicable to any form of singletree and which shall be provided with a head carrying an arm over which the trace is adapted to be passed, the said arm after such passage automatically assuming a position in the path of such passage of the trace, and thereby locking the same against removal.

It consists of certain novel constructions, combinations, and arrangements of parts, as will be hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 represents a longitudinal central section through a trace-fastener embodying the features of the present invention and shown applied to a portion of a singletree. Fig. 2 represents an inverted plan view of the same; and Fig. 3 represents a view in side elevation of a slightly-modified form of the same, parts being broken away to more clearly disclose the construction.

In the art to which the present invention relates it has been found desirable to produce a trace guard or lock which has no projecting corners which are liable to become engaged by some foreign article and broken or injured, whereby the lock is rendered less efficient or entirely worthless, and it has also been considered beneficial to provide a lock of neat appearance and not burdened with heavy clumsy springs, while at the same time automatic in its action. The present invention is believed to fully embody all of these advantages and overcome the mentioned as well as many other objections, and the said inven-

tion will be better understood by reference to the accompanying drawings, in which—

The numeral 1 indicates the body portion of a trace-fastener, which is of any preferred contour and is formed with a suitable head, as 2, preferably tapering outward to a point, as at 3, the said head being formed with a groove, as 4, preferably extending longitudinally thereof and opening at the point 3, which groove is adapted to receive an arm, as 5, which is pivoted therein, as at 6. The arm 5 is preferably notched, as at 7, and formed with a lug, as 8, which presses one end of a coiled spring, as 9, the opposite end of said spring pressing the upper wall of groove 4, whereby the said arm 5 has its inner end normally outwardly pressed, and it will be seen that by means of said notch the spring 9 may be inclosed by arm 5 when the same is pressed inwardly, and the upper edge of said arm may thereby be caused to lie in contact with the upper wall of groove 4, thereby substantially filling the whole of said groove. The outer end of arm 5 beyond pivot 6 is normally held in contact with the upper wall of the outer end of groove 4, whereby the inner end of said arm is prevented from projecting out of said groove far enough to expose any portion of its upper edge or of the notch 7, thereby obviating the objection of projecting corners, said outer end extending to the end of groove 4 and forming a portion of the pointed end of head 2.

As seen in Fig. 1, the body portion 1 is preferably provided with a suitable annular shoulder, as 10, and a screw, as 11, which is adapted to be threaded into the end of a singletree, as shown, the trace-fastener thereby being applicable to any of the singletrees now in use. A suitable ferrule, as 12, may be applied to the end of the singletree without interfering with my present trace-fastener.

As seen in Fig. 3, the body portion 1 may be provided with an annular flange, as 13, of the same diameter as that of the end of the singletree to which it is to be applied, the outer periphery of said flange being formed integral with a ferrule 12', which is usually sufficient to retain the trace-fastener in position; but I may, if preferred, provide the body portion 1 with a screw, as 11', for assist-



ing in such retention. The use of screw 11' is of course optional and may be dispensed with, if desired.

The operation of the parts will be readily apparent from the foregoing. A trace, as 14, is passed laterally over head 2, longitudinally thereof, the arm 5 assuming the position within groove 4 against the pressure of spring 9, as shown in Fig. 3, until said trace is pressed to its position on body portion 1, when the said spring 9 again forces arm 4 to its normal position, and the said trace is thereby locked against accidental removal.

It will be seen that spring 9 may be dispensed with altogether, and arm 5, moving in a vertical plane, will act by gravity; but I prefer to employ a spring to make such action more rapid and positive, and I prefer the coiled form of spring for the reason that it is lighter, cheaper, and more durable than any other form of spring; but it will of course be understood that any form of spring may be used within the spirit of the present invention.

Although I have specifically set forth one particular embodiment of the present invention, yet I do not wish to be understood as limiting myself to the exact details of structure disclosed, but shall feel at liberty to deviate therefrom to the extent of the scope of my invention.

To the many advantages of the present construction the fact that groove 4 is formed in the under face of head 2 contributes materially, as it obviates danger of foreign substances, as rain or dirt thrown from the vehicle-wheels, entering the same, whereby a perfect operation of the parts is always insured.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A trace-fastener, comprising a body portion, a grooved head formed thereon, an arm

pivoted near one end in said groove and notched in its upper face, and a spring interposed between the upper wall of said groove and the notched portion of said arm, whereby said arm is adapted to have its free end normally projecting beyond said groove but may be pressed into the same until its upper face lies in contact with said upper face of the groove, the notch of said arm inclosing said spring, and the under face of the arm lying flush with the under face of said head, the said groove being thereby substantially wholly filled, substantially as described.

2. A trace-fastener, comprising a body portion, a longitudinally-grooved head, an arm movable within said groove, means pivotally securing said arm near one end thereof, whereby the free end of said arm is adapted to normally project beyond the side walls of said groove, while the opposite end, beyond said pivot is designed to contact with the upper wall thereof for limiting the outward movement of said free end, substantially as described.

3. A trace-fastener, comprising a body portion, a grooved head thereon, an arm pivoted at one end within said groove, a notch being formed in said arm, a lug projecting inwardly from the base of said notch, a coiled spring interposed between said arm and the upper wall of said groove, and having its lower end surrounding said lug, whereby the said spring is prevented from lateral movement, and means for preventing the notched portion of said arm from being exposed beyond the wall of said groove, substantially as described.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

THORE A. BAKKEN.

Witnesses:

JENNIE O. HAGMANN,  
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